

REMARKS

Claims 1, 2, 5-12, 18-22, 49-51, 56, 57, 60, 65-82, 84, 89, 90, and 93 are pending in the application. Claims 98-109 have been withdrawn. The independent claims have been amended by wording similar to that beginning at line 16 of page 154.

Claims 1, 2, 5-12, 18-22, 49, 51, 65-82, 84, 89, and 90 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

Claims 1, 2, 5-7, 9, 11, 18, 49, 51, 56, 60, 65, 67, 69, 82, 84, 89, and 93 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jha (U.S. Patent No. 7,161,946). **Claim 8, 10, 12, 19-22, 50, 57, 66, 71, 77-80, and 90** stands rejected under 35 U.S.C. §103(a) as being unpatentable over Jha and in view of Hama (U.S. Patent Publication 2004/0202171). **Claims 68 and 70** stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jha and in view of Chase. **Claims 71-76 and 81** stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jha and Hama and in view of Kompella.

Applicants respectfully traverse these rejections in the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the claimed invention (e.g., as defined by the independent claims including independent claim 1) is directed to a frame transfer method in a network for transferring a data frame sent from a source on the network to a predetermined destination, said method including adding, to said data frame, an expansion tag containing information about forwarding to an egress edge node to said destination, to make an expansion frame and relaying by one or more nodes on said network, said data frame based on said forwarding

information of said added expansion tag, to transfer the frame to said egress edge node, said node relaying said data frame by using said expansion tag to determine an output port without conducting an MAC address search.

Conventional Ethernet nodes determine an output port of an input Ethernet frame based on destination MAC address information. As a result of the destination MAC information being locally defined and 48 bits, every most requires an entry in a frame data base. In addition, a 48-bit complete matching search is required to determine an output port.

The claimed invention, however, includes, *“an expansion tag containing information about forwarding to an egress edge node to the destination to make an expansion frame, and relaying the data frame based on the forwarding information of the added expansion tag to transfer the frame to the egress node by each node on the network,”* and *“said node relaying said data frame by using said expansion tag to determine an output port without conducting an MAC address search,”* as recited in claim 1. This is important for speeding up and simplifying the search for the destination MAC address. (See the Application, page 4, lines 1-23) In addition, these frames can be compatible with an existing node and an expansion-tag-compatible node. (See the Application, page 50, lines 14-18)

II. RECONSIDERATION OF RESTRICTION REQUIREMENT

On page 2 of the Office Action, the Examiner withdraws newly presented claims 98-109 under 37 C.F.R. §1.142(b). In particular, the Examiner alleges that the newly presented claims 98-109 are “independent or distinct” from the invention as originally claimed.

Applicant hereby requests reconsideration of the restriction requirement under 37 C.F.R. §1.143 because the Examiner has not adequately detailed how the different

subcombinations have different utility or are independent and distinct as required by the MPEP. Furthermore, Applicant maintains the right to request rejoinder of these claims once allowable subject matter is determined.

III. THE ALLEGED SECTION 112, SECOND PARAGRAPH REJECTION

On page 3 of the Office Action, the Examiner rejects claims **1, 2, 5-12, 18-22, 49, 51, 65-82, 84, 89, and 90** for reciting a limitation “applied,” in manner that was confusing. Applicant has amended the claim to obviate the rejection. Therefore, Applicant submits that claim satisfies the requirements of section 112, second paragraph.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection to claim 1, 2, 5-12, 18-22, 49, 51, 65-82, 84, 89, and 90 and to the dependent claims thereof.

IV. THE ALLEGED SECTION 101 REJECTION

On page 3 of the Office Action, the Examiner rejects claims 82, 84, 89, 90, and 93 as being directed to non-statutory subject matter.

While Applicant completely disagrees, Applicant has amended claims 82, 84, 89, 90, and 93 in order to tie the method steps to a processor, in order to expedite prosecution.

Applicant submits that claims directed to storage media storing computer programs are well known and commonly accepted in the art, since the term program connotes a process and since such storage media are objects of manufacture, in view of the holding of *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995) wherein the Commissioner conceded “that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable

subject matter under 35 U.S.C. §101 and must be examined under 35 U.S.C. §§ 102 and 103.” U.S. Patent Number 5,710,578 issued on January 20, 1998, that includes claims directed to a “computer program product.”

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw these rejections.

IV. THE ALLEGED PRIOR ART REFERENCES

A. Jha

On page 4 of the Office Action, claims 1-2, 5-7, 9, 11, 18, 49, 51, 56, 60, 65, 67, 69, 82, 84, 89, and 93 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jha. Applicants submit, however, there are features recited in the rejected claims that are neither disclosed nor suggested by Jha.

Claim 1 recites, among other things, adding “an expansion tag containing information about forwarding to an egress edge node,” and “said node relaying said data frame by using said expansion tag to determine an output port without conducting an MAC address search.” That is, forwarding information concerning an egress edge node is added so that a MAC search does not have to be conducted in the network.

Jha is directed to adding an MPLS identification field 102 to an Ethernet frame. In addition, MPLS label stack 104 is added. Label stack 104 includes various headers such as headers identifying a class of service or time to live. *See* Jha, Col. 3, Lines 35-46.

MPLS identification field 102 identifies a label switch path (LSP) through the MPLS protocol. Jha describes that the MPLS protocols allow for creation of path reservations through the physical layer 134 of the network 132. The path reservation identifies the paths

to be taken. *See* Jha, Col. 4, Lines 17-28. Thus, while the frames may be forwarded, they are forwarded to the network itself, not to the egress node. While in the network, Jha discloses that the frame will follow the path dictated by the added MPLS identification field 102. *See* Jha, Col. 5, Lines 30-32.

Contrary to the claimed invention, the path reservations included in MPLS identification field 102 do not disclose or suggest the “expansion tag,” having forwarding information to an egress node. Instead, Jha discloses traffic engineering, reserved paths for data. *See* Jha, Col. 5, Lines 4-18. Therefore, as illustrated in Figure 6, a path has to be established first, in order to determine the route through network 142. *See* Jha, Col. 5, Lines 19-32.

That is, the operation of the claimed invention is completely different than that of Jha because Jha is directed to creating Ethernet paths via “traffic engineering” that is described in an identification field whereas the claimed invention relies on the address of the egress node within the Network.

A. Jha and Hama

Next, on page 7 of the Office Action, the Examiner admits that Jha does not teach a frame to be broadcast with respect to claim 50. The Examiner then attempts to make up for Jha’s admitted deficiencies by alleging that Hama makes up for Jha’s deficiencies.

On page 8 of the Office Action, the Examiner alleges that Hama makes up for Jha by also teaching identifier information of an ingress node.

To establish a *prima facie* case of obviousness, several basic criteria must be met. First, rejections on obviousness grounds cannot be sustained by mere conclusory statements;

instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (*In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) cited with approval in *KSR Int'l. v. Teleflex, Inc.*, 127 S.Ct. 1727 (2007)). In addition, the prior art reference (or references when combined) must still teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Accordingly, as described above, Jha fails to disclose every element as recited in the independent claims and, as admitted by the Examiner, Hama fails to make up for Jha's deficiencies.

Because a combination of Jha and Hama fails to teach or suggest every element as claimed in the independent claims, independent claims 1, 2, 49-51, 56, 57, 60, 84, 89, 90, and 93 are improperly rejected in light of Jha and Hama. Accordingly, Applicant submits that these claims are in condition for allowance.

With respect to claims 5-12, 18-22, and 65-82, which depend from independent claims 1 and 49 respectively, each of these claims contains all the limitations contained within independent claims 1 and 49 and are therefore are also in condition for allowance.

Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicants submits that claims 1, 2, 5-12, 18-22, 49-51, 56, 57, 60, 65-82, 84, 89, 90, and 93, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest

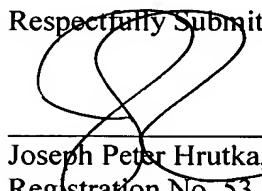
possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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